

PROJECT NUMBER : 2305
PROJECT TITLE : Applied Flavor Investigation
PROJECT LEADER : J. W. Swain
PERIOD COVERED : February, 1991

I. PROCESS SUPPORT

- A. **Objective:** To develop and evaluate process modifications to maintain subjective and physical quality.
- B. **Status:** Analyses of Marlboro control and two test prototype cigarettes with reduced humectant levels in the RL's and RCB have been completed. Subjective evaluations have been initiated to select either the prototype with the target or increased soluble level RL's for POL tests in June.

RLTC trials were completed at Park 500 at three soluble levels to test the original versus the evaporator upgrade system. Analytical and subjective comparisons of the RL's are in progress prior to making Marlboro cigarettes for POL 3646 (Run 3) which is scheduled to be shipped to panelists in April.

Analytical and subjective tests showed no differences between MC DET from trials of CO₂ from the original S1 versus the new S2 CO₂ holding tanks. Qualification of S2 was recommended.

C. **Plans:**

Initiate POL tests of reduced humectant RL's and RCB in Marlboro	April, 1991
Ship POL 3646 (Run 3) Evaporator Upgrade	April, 1991

II. DRY FLAVOR REPLACEMENT

- A. **Objective:** To develop, evaluate and establish specifications for dry flavor replacements.
- B. **Status:** Approvals for the flavor metering equipment at Park 500 have been signed for implementation of the dry flavor replacements in RLB. Scheduling of the preparation and analyses of the solid extract at the Flavor Center are in progress for implementation at Park 500 in May. Analytical and subjective evaluations are in progress on a series of native extracts from an alternate vendor. Samples were submitted to develop analytical specification methods for the flavors at the Flavor Center.

C. Plans:

Implementation at Park 500	May, 1991
Initiate Tests of Replacements in RCB	2nd Quarter, 1991

III. CAST LEAF PROGRAM**A. Objective:** To develop and evaluate flavor systems for cast sheet utilization.**B. Status:** Stepwise substitution of ASTA for RCB will be recommended for the Spanish Marlboro based upon Richmond Panel evaluations of 4% and 7% levels of ASTA. Provisions have been made to supply flavors in April for ASTA production to replace 4% RCB in Marlboro as early as August, 1991.

Cast Leaf Lab trials of SIVA to replace RL's are in progress to evaluate modification in flavors and feedstock prior to further production trials in Cadiz. Since approximately 35 formulations of normal Spanish feedstock in SIVA had failed to produce the flavor and response of the target RL's, changes in the feedstock were tested. Initial subjective evaluations have shown that incorporating at least 20% burley stems in the Spanish feedstock produced attributes in the direction of RL's.

C. Plans:

Complete Feedstock Tests	March, 1991
Select Formulations for Cadiz Trials	March, 1991

IV. NET PROGRAM**A. Objective:** Provide Flavor Technology Support for the New Expanded Tobacco Program.**B. Status:** Subjective evaluations showed normal cased NET from gaseous impregnated #10 Bright to be most similar to cased DET as compared to uncased, precased with sugar only and postcased NET. Analytical data from the trials of 100% NET cigarettes showed differences related to filler weights.

Current strategy involves CO₂ impregnation of filler at Bermuda Hundred and expansion in the 8" Tower. Several NET trials are under analytical and subjective evaluations.

V. OPERATIONS SUPPORT**"PROJECT GRAIN"****A. Objective:** To significantly reduce alcohol levels in PM flavor systems, while maintaining product subjective integrity.

- B. Status: Marlboro cigarettes with a 50% reduction of alcohol in the Burley Top Casing are being made to test on the Marlboro Monadic Panel. POL 0381 is scheduled to be shipped in April. Marlboro cigarettes from large-scale Semiworks trials of further alcohol reductions (75% and 100%) in the BTC have been analyzed and submitted for evaluation by the MC Panel.

Semiworks trials have been requested to evaluate PG rearrangement from the Bright Casing to the AC in efforts to compensate for 25% and 50% alcohol reductions in the Marlboro AC. Lab scale analytical results were promising.

C. Plans:

Ship POL 0381 of BTC Test April, 1991

Evaluate PG Rearrangement March, 1991